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SUNFLOWERS AND THE POTENTIAL FOR PROCESSING

by
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Sunflowers have come of age in the Upper Midwest!

Are they here to stay? Does South Dakota support an oil processing plant?

The U.S. actually inherited a market for sunflower seed when the Russians needed foreign exchange in the mid 1960s and sold some sunflowers into Western Europe. The people there liked the oil and the demand has been growing ever since; but the Russians quit exporting seeds. Most of the demand from Europe is for the seeds, but there is also a growing demand for sunflower oil in Japan and other Far East Markets.

Russia is the biggest world producer of sunflowers and first in export of sunflower oil. The U.S. this year became the second largest producer of sunflowers and has 86 percent of the seed exports, but is fifth in sunflower oil exports with only three percent of the world market. Most of our seeds are exported through Duluth where their light weight relative to bulk makes them a good cargo at that shallow port.

The high demand for sunflower seeds and oil have led to relatively high prices. The U.S. has had a rapid response where acreages have expanded from 677 thousand acres in 1974 to 5,570 acres in 1979 - an eight-fold increase in only five years. Sunflowers are an excellent alternative cash crop for farmers in North Dakota, Minnesota and South Dakota where about 99 percent of the sunflowers in the U.S. are grown. In 1979, the sunflower acreage for these states even exceeded the acreages of some traditional crops as shown in the following table.

Comparative Acres for Harvest of Durum, Barley and Sunflowers 1979
(Thousand acres)

	Durum Wheat	Barley	Sunflowers
North Dakota	3,250	1,650	3,405
South Dakota	170	525	615
Minnesota	77	760	1,378
Total	3,497	1,935	5,398

Sunflower acreage in South Dakota for 1979 also exceeds acres harvested of winter wheat (600,000), rye (195,000), soybeans (590,000) and sorghum (310,000).

There has been increasing interest in South Dakota to obtain a processing plant to crush our own oilseeds, thereby having a closer market for seeds, providing more local jobs and taking advantage of the rapidly expanding oil market.

In most cases, any plant constructed would be an oilseed plant rather than an exclusive sunflower plant. A sunflower-flax combination is very good in that both are processed in the same manner. Crushers, however, seem to prefer a sunflower-soybean combination; but a combination of all three oilseeds is practical. It would cost about $800,000 more to add soybean processing to a combination plant even though a plant exclusively processing soybeans is cheaper to build than a sunflower-flaxseed processing plant.

This is the first year South Dakota has had sufficient oilseed production to attract the interest of processors. Now the potential processors want to know: Will the acreages of oilseeds in South Dakota continue to grow, remain the same, or decline? And what tangible evidence do we have to support our beliefs?

The following table shows the rather remarkable increases in oilseed

acreages in South Dakota for 1978 and 1979:

	(Thousand acres) 1978	1979	change
Sunflowers	160	615	+260 percent
Soybeans	390	590	+ 66 percent
Flaxseed	288	350	+ 82 percent
Safflower	NA	29	
	838	1584	

Since sunflowers are well adapted as an alternative to every crop except perhaps corn and soybeans, their production will most likely continue to increase in South Dakota although at a somewhat slower pace.

Some physical requirements of a major oilseed processing plant include a minimum site of at least 20 acres and possibly 35 or 40 if future expansion is considered. The current estimated price of a 1000 ton per day combination processing plant is about $25-$27 million. A plant this size would probably employ 60-75 people.

An oil extraction plant is a clean industry so it can be built near or even in a town or city. The only emission from the plant would be an occasional slight, sweet odor. There is hardly any dust. Water needs are quite high - 172,000 gallons a day for a plant this size, but water pollution is not a problem. There is a need for a disposal system which could be the city sewer system or a lagoon.

Rail and interstate highway, or other all-weather roads, are very important to a plant site. Rail car storage or a spur track is necessary and a loop spur is preferred to a closed-end spur.

Most oil extraction plants plan to buy from local elevators and perhaps some directly from farmers. In most cases, the producer can deliver to the plant but get paid by his local elevator.

It's estimated that it takes 600,000 acres of oilseed to support a processing plant. As shown earlier, South Dakota has over 1½ million acres in 1979, and oilseed acreage in the state is expected to increase for the forseeable future.

Soybean acreages are currently concentrated in the Southeast section of South Dakota, while most flax and sunflower acreages are located in the Northeast section. The greatest future expansion of sunflowers is expected in the central part of the state.

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